U.S. Department of Transportation

Intelligent Transportation Systems Standards Fact Sheet

August 2000

SAE J2313 On-Board Land Vehicle Mayday Reporting Interface

Overview

Systems that are used to alert emergency response agencies that an individual vehicle has been involved in an accident are commonly referred to as "mayday systems." Unfortunately, the 30 or so different mayday systems that have been installed in many vehicles recently cannot communicate with each other, nor are they compatible with existing national, state, or local level emergency (911) response agencies. Most of these systems are comprised of cellular telephones equipped with a geostationary positioning system (GPS) and a modem. Future systems, however, are expected to be integrated into a vehicle's electronics suite and will be capable of fully automated deployment without human intervention. In addition, mayday service providers have begun to combine this service with various other ITS services, such as advanced traveler information systems (ATIS). Due to the public perception that such systems should have a basic level of functionality anywhere in the country, the industry is designing components that can work together using common interface standards. The purpose of SAE J2313 is to establish and define a common messaging methodology to allow the maximum amount of interface between private service providers and local government emergency management agencies. This interface is proposed to operate over a variety of telecommunications links extending from the vehicle.

To obtain a copy of this standard, please contact:

Society of Automotive Engineers (SAE)
400 Commonwealth Drive
Warrendale, PA 15096
Tel: (724) 776-4841
Fax: (724) 776-0790
Web site: www.sae.org

Publication Date: September 1999

What is this standard for?

This standard, **SAE J2313, On-Board Land Vehicle Mayday Reporting Interface,** is intended to standardize industry requirements regarding the message content which vehicles can be expected to exchange with receiving response agencies, and to establish a common message set, basic message support requirements, and simple protocols of data exchange. It prescribes various protocol methods so that vendors with different communication methods can "speak" to response agencies in a standardized format.

Who uses it?

This standard is intended for use by private industry (e.g., manufacturers) and public safety and emergency response agencies (at the receiving/dispatching point) at local, state, and national levels. Receiving devices are expected to be found at local public response dispatch points (primary safety answering points).

How is it used?

When a vehicle is involved in an incident (e.g., collision or roadside breakdown), a call to a response agency is initiated. Initiation can be automatic or manual depending on device features. When automatic, SAE standards such as J2366, J2367, or J1708 may be involved to integrate vehicle sub-systems. Once the telecommunication media used has connected, the device sends, in a standardized way, information about the vehicle (state of various safety systems, precise location, recent path locations, vehicle identification number [VIN] and description, etc.) to the response point, where a dispatching computer displays this information. The operator can query for additional data, retransmission, or updates; alternatively, the operator may be able to speak with the person requiring aid at the site. The dispatch operator then initiates the appropriate response, possibly using the IEEE incident management message set (IEEE Std 1512 - 2000). Private response companies typically follow this pattern as well, it can also use the devices for non-emergency assistance, such as lost drivers, etc.

Scope

This standard describes the interface between an on-vehicle mayday detection reporting system and the emergency response center that responds to the call for assistance. Automatic detection and reporting either by the vehicle or by roadside detectors is also an essential component described in this standard.

This standard addresses the functionality of the vehicle in detecting and reporting such an event. Equipment suites on each vehicle will vary widely, as will the communications channel employed to report the incident. This standard prescribes a basic methodology to incorporate uniformly whatever level of data reporting the vehicle supports (containing information about both the vehicle condition and any occupant data). The data is then transmitted to the response management agency in a standardized format regardless of the transmission media used to effect the communications.

Related documents

SAE J2366 – ITS Data Bus Protocol Standard

SAE J2367 – ITS Data Bus Gateway Standard

SAE J1708 – Serial Data Communication Between Microcomputer and Heavy Duty Vehicle Applications

SAE J2374 – Location Referencing Message Specification

SAE J2354 – ATIS Message Sets

IEEE Std 1512-2000 – Standard for Common Incident Management Message Sets for Use by EMCs

For more information on ITS standards, contact the Federal Highway Administration, ITS Joint Program Office, Room 3401, HOIT, 400 7th Street, SW, Washington, DC 20590, phone: 202-366-2180, fax: 202-366-3302, Web site: www.its-standards.net

Produced by the Jet Propulsion Laboratory for the U.S. Department of Transportation.